

UNIT PRICE CATALOG		REPLACEMENT SHEET	
1014 Catalog Entries		Location Factor:	
© 2002 Project Planning & Management, Inc.		Sales Tax:	
		Ave Sub Gen'l Conditions:	

System	Description	Base Unit Cost
col_sprd_ftg 1	3000 PSI concrete forms, rebar, concr, placing, finish	\$291.00
sprd_ftg 1	3000 PSI concrete	\$0.00
2	Not Req'd (Trench Footing)	\$10.76
3	12" thick x 18" wide; forms, reinf, direct chute	\$16.04
4	12" thick x 24" wide; forms, reinf, direct chute (For Precast Foundations) 12" thick x 24" wide; 3/4" stone bedding	\$2.22
fdn_drain 1	PVC 4" dia; gravel drain bed	\$4.00
2	PVC 6" dia; gravel drain bed	\$5.00
fdn_wall 1	4' high foundation: Poured-8"; bitum/damp; sill plates	\$25.60
2	Poured-10"; bitum/damp; sill plates	\$28.26
3	Poured-10"; brickledge; bitum/damp; sill plates	\$32.04
4	Poured-12"; bitum/damp; sill plates	\$32.60
5	Poured-12"; brickledge; bitum/damp; sill plates	\$36.38
6	Block-8", grouted; bitum/damp; parging; sill plates	\$42.68
7	Block-10", grouted; bitum/damp; parging; sill plates	\$50.44
8	Block-12", grouted; parging; bitum/damp; sill plates	\$58.20
9	Pre-Cast Wall System; 1" Rigid Insul (R-5), furring ribs; sill plates	\$40.63

FIGURE 2a

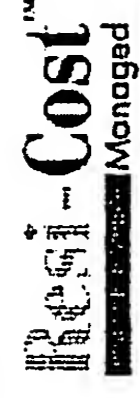
0.93 MASTER [BASELINE] Resi-Cost™		Cost Adjustments			
6.00% Berrien City, MI					
0%					
Adjusted Unit Cost	Unit	Loc Fctr	S Tax	Sub GC	
\$278.75	CY	0.93	3.00%	0%	
\$0.00	LF				
\$10.31	LF	0.93	3.00%	0%	
\$15.36	LF	0.93	3.00%	0%	
\$2.13	LF	0.93	3.00%	0%	
\$3.83	LF	0.93	3.00%	0%	
\$4.79	LF	0.93	3.00%	0%	
\$24.52	LF	0.93	3.00%	0%	
\$27.07	LF	0.93	3.00%	0%	
\$30.69	LF	0.93	3.00%	0%	
\$31.23	LF	0.93	3.00%	0%	
\$34.85	LF	0.93	3.00%	0%	
\$40.88	LF	0.93	3.00%	0%	
\$48.32	LF	0.93	3.00%	0%	
\$55.75	LF	0.93	3.00%	0%	
\$38.91	LF	0.93	3.00%	0%	

REPLACEMENT SHEET

FIGURE 2b

ENERGY MODEL

MASTER [BASELINE] Resi-Cost™



TOTAL FINISHED AREA (TFA): 2,400 SF  
TOTAL CONSTRUCTED AREA: 4,764 SF

Berrien City, MI  
3 Bedroom; 1 Full; 1 Half Baths

Enter:	State	Residential Energy Code	State	Mandate	Comments
MI	Michigan	Michigan Uniform Energy Code Part 10 Rules, less stringent than 1992 MEC	Yes		Prior to June 22, 1977, the state of Michigan had no building energy efficiency requirements. On July 27, 1985, the state adopted ANSI/ASHRAE/IES Standard 90A-1980 statewide. SB 719, signed in early January 1996, repealed the 1995 adoption of the 1993 MEC. The legislation directed the state construction code commission to, by April 1, 1997, provide cost-effective standards and establish a program to provide home buyers with energy rating information. The Michigan Uniform Energy Code Part 10 Rules were adopted March 31, 1999.

Envelope Heat Loss	Area (SF)	R-Value	U Factor	Delta T	Heat Loss (BTUH)
Heat Loss-Basement Walls-ENERGY STAR	1,479	15	0.07	22	2,169
Heat Loss-Basement Floor (or Ground Flr Slab)	1,500	25	0.04	22	1,320
Heat Loss-Walkout Wall	0	0	0.00	67	-
Heat Loss-Walls	1,751	10	0.10	67	11,970
Heat Loss-Walls (Supplemental)	0	0	0.00	67	-
Heat Loss-Windows (low-E) Default (R-3)	345	3	0.33	67	7,705
Heat Loss-Windows Standard Glazing (R-2)	0	2	0.50	67	-
Heat Loss-Windows (low-E) Triple Glaze (R-6)	0	6	0.17	67	-
Heat Loss-Doorwalls	0	3	0.33	67	-
Heat Loss-Doorwalls	0	3	0.33	67	-
Heat Loss-Doors	63	5	0.20	67	844
Heat Loss-Roof SIP (on Timber)	0	0	0.00	67	-
Heat Loss-Roof SIP (on SIP)	0	0	0.00	67	-
Heat Loss-Attic (Uninsulated Roof Rafters)	1,500	22	0.05	67	4,653
Heat Loss-Skylights	0	3	0.33	67	-
Building Envelope Heat Loss					28,661 BTUH

FIGURE 5a

REPLACEMENT SHEET

5	ASHRAE 99% Design Dry Bulb Temp (deg F)
72	Indoor Design Temp (deg F)
67	Delta T

68,097	Total BTUH Demand
1.4	Furnace Sizing Factor
120,000	Furnace Size at 80%
106,000	Meets Energy Star: Furnace Size at 90%
102,000	Furnace Size at 94%
96,000	Furnace Size at 100% (ELECTRIC)

REPLACEMENT SHEET

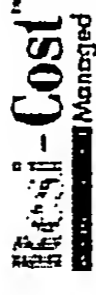
FIGURE 5b

Envelope Tightness						
Select >	2	Tight Stick Built	1.00	ACH (Air Changes / Hour)	Design Occupancy:	4
Infiltration / Ventilation		CFM	ACH	Constant	Volume	Delta T
Natural Infiltration		545	1.00	1.08	32,700	67
Mechanical Ventilation w/AAUX		0	1.00	1.08	32,700	18
75% AAUX Efficiency		108	Min Target CFM			
Envelope + Infiltration Heat Loss =		68,097		BTUH		
Furnace AFUE =		94%		3	<Select Furnace Efficiency	
D = Degree Days = 6,235 Berrien City, MI < (per US Weather Service)						
T = Temp diff = 67 degrees						
V = Fuel value = 1,052 BTUh per cu ft natural gas						
V = Fuel value = 91,743 BTUh per Gallon propane						
V = Fuel value = 3,413 BTUh per KWH electric						
CF1 = 1.36 Correction factor that includes the effects of rated full load efficiency, part load performance, over sizing and energy conservation devices.						
CF2 = 0.71 Empirical correction factor for heating effect versus 65 degrees F degrees-days.						
E = Annual Energy Consumption = 148,509 cu ft natural gas						
1,703 gallons of propane						
- KWH of electricity (100% Eff)						
Annual Heating Cost =		\$1,351.43		NGAS		
Annual Heating Cost =		\$2,656.57		PROPANE		
Annual Heating Cost =		\$0.00		ELECTRIC		

FIGURE 5C REPLACEMENT SHEET

HOME SPECIFIC QUALITY / COST SELECTIONS  
SUBSYSTEMS AND CONSTRUCTION ASSEMBLY OPTIONS  
© 2002 Home-Cost.com 261 System Selections

MASTER [BASELINE] Resi-Cost™  
Benton City, MI  
TOTAL FINISHED AREA: 2,400 SF  
TOTAL CONSTRUCTED AREA: 4,764 SF 3 Bedroom, 1 Full, 1 Half Baths



SYSTEM	SUBSYSTEM	CONSTRUCTION ASSEMBLY OPTIONS					BASELINE	
		Selection	quan	unit	unit \$	total \$	TOTAL	Savings
01 Foundation	011 Standard Foundations	011.10 Spread footings (timber columns)	1	Not Used		\$0	\$0	\$0
		011.10 Spread footings (lally columns)	2	12" thick 36"x36"; forms, rebar, concrete	\$64.53	\$372	\$372	\$0
		011.20 Spread footings (foundation walls)	4	12" thick x 24" wide; forms, reinf, direct chute	\$92.92	\$1,659	\$1,659	\$0
		011.20 Spread footings (basement walls)	5	12" thick x 24" wide; forms, reinf, direct chute, PVC 6" gravel drainbed	\$15.36	\$3,312	\$3,312	\$0
		011.30 Foundation Wall (4' high)	2	Poured 10"; bitum/damp; sill plates	\$20.15	\$4,061	\$4,061	\$0
		011.40 Excavation: Foundation Wall Footing	2	4' depth spread fig excav, sand/gravel; backfill	\$27.07	\$483	\$483	\$0
	012 Special Foundations	1	No additional special foundations	SF	\$0.56	\$0	\$0	\$0
	021 Slab on Grade	021.00 Ground Floor Slab on Grade	2,364		\$0.00	\$0	\$0	\$0
		021.00 Garage Floor Slab on Grade	0	Not Used	\$0.00	\$0	\$0	\$0
		021.00 Basement Slab on Grade	864	5" slab w/4" gravel base; 6 mil vap; expan mat; W1.4W1.4; steel trowe	\$3.11	\$2,690	\$2,690	\$0
		021.00 Crawspace Floor	1,500	4" slab w/4" gravel base; 6 mil vap; expan mat; W1.4W1.4; steel trowe	\$2.82	\$4,224	\$4,224	\$0
02 Substructure	021.10 Ground Floor Slab Insulation	1	Not Used	SF	\$0.00	\$0	\$0	\$0
		1	Not Used	SF	\$0.00	\$0	\$0	\$0
		1	Not Used	SF	\$0.00	\$0	\$0	\$0
		1	Not Used	SF	\$0.00	\$0	\$0	\$0
	022 Excavation: Basement / Cravl	3	Walkout Sand & gravel excav, backfill; compaction B' fills; rough grade	CY	\$6.11	\$3,057	\$3,057	\$0
		1	Assumes off-site hauling NOT required (Assumes on site placement of:	CY	\$0.00	\$0	\$0	\$0
	023 Basement Walls	2	Poured 10"; bitum/damp; sill plates	1,101 BWA	\$7.11	\$7,823	\$7,823	\$0
		1	Not Used	0 BWA	\$0.00	\$0	\$0	\$0
		4	3" rigid 25 PSI Compressive (R-15) ENERGY STAR COMPLIANT	1,101 BWA	\$1.39	\$1,528	\$1,528	\$0

REPLACEMENT SHEET

FIGURE 6a

SYSTEM	SUBSYSTEM	Selection	CONSTRUCTION ASSEMBLY OPTIONS				BASELINE	
			quan	unit	unit \$	total \$	TOTAL	Savings
01 Foundation	011 Standard Foundations	011.10 Spread footings (timber columns)	1	Not Used		\$0	\$0	\$0
		011.10 Spread footings (ally columns)	2	12" thick-36"x36"; forms, rebar, concrete	\$64.53	\$372	\$372	\$0
		011.20 Spread footings (foundation walls)	4	12" thick x 24" wide; forms, reinf, direct chute	\$92.92	\$1,659	\$1,659	\$0
		011.20 Spread footings (basement walls)	5	12" thick x 24" wide; forms, reinf, direct chute, PVC 6" gravel drainbed	\$15.36	\$3,312	\$3,312	\$0
		011.30 Foundation Wall (4' high)	108	Poured-10"; bitumidamp; sill plates	\$20.15	\$2,924	\$4,061	(\$1,137)
		011.40 Excavation: Foundation Wall Footing	108	4' depth spread flg excav, sand/gravel, backfill	\$27.07	\$483	\$483	\$0
		012 Special Foundations	864	No additional special foundations	\$0.56	\$0	\$0	\$0
		021 Slab on Grade	2,354		\$0.00	\$0	\$0	\$0
		021.00 Ground Floor Slab on Grade	0	Not Used	\$0.00	\$0	\$0	\$0
		021.00 Garage Floor Slab on Grade	864	5" slab w/4" gravel base; 6 mil vap, expan mat, W1.4/W1.4; steel Rowe	\$3.11	\$2,690	\$2,690	\$0
02 Substructure	021.10 Basement Slab on Grade	021.00 Basement Slab on Grade	1,500	4" slab w/4" gravel base; 6 mil vap, expan mat, W1.4/W1.4; steel Rowe	\$2.82	\$4,224	\$4,224	\$0
		021.00 Crawlspace Floor	0	Not Used	\$0.00	\$0	\$0	\$0
		021.10 Ground Floor Slab Insulation	0	Not Used	\$0.00	\$0	\$0	\$0
		021.10 Basement Slab Insulation	0	Not Used	\$0.00	\$0	\$0	\$0
		022 Excavation: Basement / Crawl	3	<ERROR> Must Select '1' or '2'-Full Basement Option	<ERROR>	#VALUE!	\$3,057	#VALUE!
		022.00 Off Site Trucking	0	Assumes off-site hauling NOT required (Assumes on site placement of s	\$0.00	\$0	\$0	\$0
		023 Basement Walls	1,479	Poured-10"; bitumidamp; sill plates	\$7.11	\$10,509	\$7,823	\$2,686
		023.00 Exposed Basement Wall Framing	0	Not Used	\$0.00	\$0	\$0	\$0
		023.10 Basement Wall Insulation	1,479	3" rigid-25 PSI Compressive (R-15) ENERGY STAR COMPLIANT	\$1.39	\$2,053	\$1,528	\$525

Alternate Selections illustrating self documenting line item changes to component costs and Self-Correcting feature (Line 022 Basement Excavation) wherein "ERROR" was triggered when "Walkout Basement" was deselected in '40' Design Characteristics, requiring selection of Full Basement excavation options.

REPLACEMENT SHEET  
FIGURE 6b

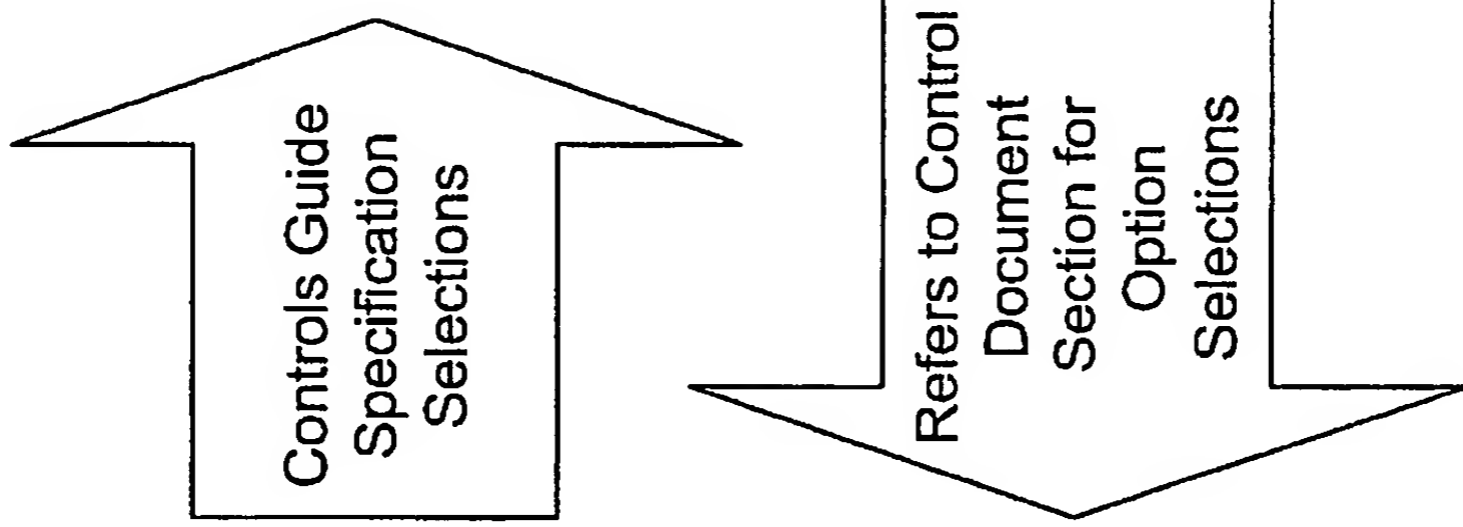
**Residential Cost Estimation  
Construction Summary  
“Component Options”**

- **Control Document** that provides outline construction descriptions of the building systems selected by the Owner.
- **Serves a similar purpose as site and engineering drawings would provide** in that scope requirements are called out for site, structural, mechanical, electrical and plumbing systems.
- Controls which material options are to be selected in cases where options exist in the guide specification sections.

**Guide Specifications  
CSI MASTERFORMAT  
Divisions 1-16**

**Detailed Guide Specifications including all  
16 CSI Divisions**

- Division 1 – General requirements
- Division 2 – Site Construction
- Division 3 – Concrete
- Division 4 – Masonry
- Division 5 – Metals
- Division 6 – Wood and Plastics
- Division 7 – Thermal and Moisture Protection
- Division 8 – Doors and Windows
- Division 9 – Finishes
- Division 10 – Specialties
- Division 11 – Equipment
- Division 12 – Furnishings
- Division 13 – Special Construction
- Division 14 – Conveying Systems
- Division 15 – Mechanical
- Division 16 - Electrical



REPLACEMENT SHEET

**FIGURE 7**